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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/077,340 | 06/01/2002 | Hans G. Schantz | DDM01-039 | 2487 |

30137 7590 10/27/2003

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| EXAMINER |
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CLINGER, JAMES C

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| ART UNIT | PAPER NUMBER |
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2821

DATE MAILED: 10/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/077,340

Applicant(s)

Schantz et al.

Examiner

Jim Clinger

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Sep 29, 2003
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-9, 11-16, 18, and 19 is/are rejected.
- 7) ☒ Claim(s) 3, 10, and 17 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Jun 1, 2002 is/are a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in-

- (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
- (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claims 1, 8 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Roesner(6,147,655).

Claims 1, 8 and 15, figure 1 discloses an antenna(10), a feed structure(26 & 28) and a discontinuity extending towards and away from the feed and being close enough to the feed to couple to the feed as recited.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 4-7, 9, 11-14, 16 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roesner in view of Dettloff(6,570,541).

Claims 2, 9 and 16, Roesner does not disclose a polygonal shape element. Figure 5D of Dettloff discloses using a polygonal element with discontinuities to obtain a desired electromagnetic field pattern.

Claims 4-5 and 11-12, both references disclose multiple identical discontinuities as recited.

Claims 6-7, 13-14 and 18-19, figure 6 of Dettloff discloses an elliptical shaped antenna as recited for a desired field pattern.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the antenna shapes disclosed in Dettloff for the antenna disclosed in Roesner to obtain desired field characteristics from the antenna as disclosed in Dettloff.

Allowable Subject Matter

5. Claims 3, 10 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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6. The following is a statement of reasons for the indication of allowable subject matter.

The limitations which are primarily responsible for distinguishing these claims over the prior art are: for claims 3, 10, 17, the limitations concerning the relationship between the return and peripheral distances.

Response to Arguments

7. Applicant's arguments filed September 29, 2003 have been fully considered but they are not persuasive with respect to claims 1-2, 4-9, 11-16 and 18-19.

8. A loop is functionally specified by two axis where each axis has a separate dimension. Since two dimensions are needed for a loop, it is not a linear element like a dipole, but a planar element.

9. While the conductor which forms the antenna element disclosed in Roesner is a continuous loop, that antenna element has a perimeter and the conductor deviates from the path of the perimeter. If the perimeter is considered a structure, the deviation of the loop from the perimeter constitutes a discontinuity along the perimeter or structure as recited. One of the discontinuities disclosed in Roesner is connected to the feed(26 & 28) as referenced above.

10. Claims 2, 9 and 16 do not recite limitations concerning reducing the responsiveness of an antenna. Consequently, it is irrelevant if the referenced prior art achieve this objective. Also, the motivation for combining prior art references for a rejection under 35 USC 103 need not be the same as the motivation for making recited invention to which the rejection is applied.

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11. Roesner discloses a single discontinuity connected to a feed as referenced above. There are no recited limitations which concern or require more than a single discontinuity being connected to the feed.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

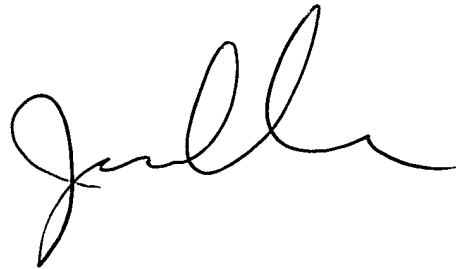
Correspondence

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Jim Clinger whose phone number is (703) 305-0619.

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Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center whose telephone number is (703) 308-0956.

Papers related to Technology Center 2800 applications only may be submitted to Technology Center 2800 by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Technology Center Fax Center number is (703) 308-7722 or (703) 308-7724.

A handwritten signature in black ink, appearing to be "Jull", written in a cursive style.